

Lauren Faucett- Online Learning Experience (OLE) Planning Grid - ITEC 7480

4th Grade Science: Ecology

This unit teaches the roles of organisms and the flow of energy within an ecosystem. It also teaches the factors that affect the survival or extinction of organisms.

Standard S4L1. Students will describe the roles of organisms and the flow of energy within an ecosystem.

- a) Identify the roles of producers, consumers, and decomposers in a community.
- b) Demonstrate the flow of energy through a food web/food chain beginning with sunlight and including producers, consumers, and decomposers.
- c) Predict how changes in the environment would affect a community (ecosystem) of organisms.
- d) Predict effects on a population if some of the plants or animals in the community are scarce or if there are too many.

Student Objectives/Outcomes:	Bloom's Level:	Activities:	Assessments:
1. Identify the roles of producers, consumers, and decomposers in a community.	Remember and Understand	<ul style="list-style-type: none"> Click HERE to learn about producers, consumers, and decomposers. Then test what you've learned in each game on the site! Virtual Lab- Click HERE to learn about and virtually dissect an owl pellet and see what you can find! Post on class discussion board: <ol style="list-style-type: none"> Describe the roles of producers, consumers, and decomposers within a community. Give two examples of each. What did you find in your owl pellet and what do your findings tell you about the owl? 	<ul style="list-style-type: none"> Instructor's feedback on the quality of candidate's ability to identify the roles of producers, consumers, and decomposers in a community and provide examples of each. (discussion rubric) Instructor's feedback on the candidate's ability to interpret their findings from the dissection to determine facts about the owl. (discussion rubric)
2. Demonstrate the flow of energy through a food web/food chain beginning with sunlight and including producers, consumers, and decomposers.	Apply	<ul style="list-style-type: none"> Explore the food web by clicking HERE to watch <i>Bill Nye: Food Web</i> (24 min) Test what you have learned about food chains/webs by playing the 	<ul style="list-style-type: none"> Instructor's feedback on the candidate's ability to demonstrate their knowledge in correctly assembling a food chain.

		<p>online Food Chain Game</p> <ul style="list-style-type: none"> • Apply your knowledge to create a food web HERE. When finished, take a screen shot to upload to your course instructor through D2L's DropBox application. 	
3. Predict how changes in the environment would affect a community (ecosystem) of organisms.	Create	<ul style="list-style-type: none"> • Populations on the earth must compete for food and space. Populations can change according to rates of reproduction, loss of habitat, and number of natural predators and parasites. *Click HERE to watch <i>Bill Nye: Populations</i> (23 min) • Reflect on what you have learned to respond to the following question in a discussion post: Rainforests now cover less than 6% of Earth's land surface. Scientists estimate that more than half of all the world's plant and animal species live in tropical rain forests. Tropical rainforests produce 40% of Earth's oxygen. How will all of the dependent species be affected if the earth's rainforests continue to decline? <ul style="list-style-type: none"> • Respond to a peer's post. 	<ul style="list-style-type: none"> • Instructor's feedback on the quality of candidate's ability to predict how changes in the environment would affect a community (ecosystem) of organisms. (discussion rubric) • Instructor's feedback on the quality of candidate's ability to thoughtfully respond to a peer's posting.
4. Predict effects on a population if some of the plants or animals in the community are scarce or if there are too many.	Create	<ul style="list-style-type: none"> • Click HERE to explore the different habitats of plants and animals in a habitat game! • Read Chapter 5, lesson 2 of your textbook. • Respond to the following scenarios with a VoiceThread and post to the class discussion board: <ul style="list-style-type: none"> ➤ The mouseasaurus eats a special plant called a cheese- 	<ul style="list-style-type: none"> • Instructor's feedback on the quality of candidate's ability to predict the effects on a population if some of the plants or animals in the community are scarce or if there are too many. (discussion rubric)

		<p>flower. The cheese flowers seem to be dying this summer because of the drought. How will this affect the mouseasauruses?</p> <p>➤ The rinopot is a predator of the snakearoo, and the snakearoo is a predator of the turkeytrat. If the rinopot becomes scarce, how will the snakearoo and turkeytrat be affected?</p>	
--	--	---	--

Lauren Faucett- Online Learning Experience (OLE) Planning Grid - ITEC 7480

Standard S4L2. Students will identify factors that affect the survival or extinction of organisms such as adaptation, variation of behaviors (hibernation) and external features (camouflage and protection).

- a) Identify external features of organisms that allow them to survive or reproduce better than organisms that do not have these features. (e.g. camouflage, use of hibernation, protection, etc.)
- b) Identify factors that may have led to the extinction of some organisms.

Student Objectives/Outcomes:	Bloom's Level:	Activities:	Assessments:
1. Identify external features of organisms that allow them to survive or reproduce better than organisms that do not have these features. (e.g. camouflage, use of hibernation, protection, etc.)	Remember	<ul style="list-style-type: none"> Download the "Animal Adaptations" PowerPoint from D2L to learn about the various types of adaptations that allow animals to survive. Click HERE to learn more about mimicry and see if you can tell the difference! Review what you have learned HERE with an animal adaptations game. Research several animals and their 	<ul style="list-style-type: none"> Instructor's feedback on the quality of candidate's ability to identify the external features of an organism that allow it to survive or reproduce better than organisms that don't have these features. (presentation rubric)

		<p>adaptations HERE and chose one to research. Remembering what you have learned from previous lessons combined with your research; address the following topics in a PowerPoint or Prezi presentation. You will present this project during the live Wimba Session next week.</p> <ul style="list-style-type: none"> ✓ Describe the environment in which your organism lives. ✓ It is a producer, consumer, or decomposer? If consumer-what kind (herbivore, carnivore, omnivore)? ✓ Identify the external features of your organism that allow it to survive or reproduce better than organisms that don't have these features. 	
2. Identify factors that may have led to the extinction of some organisms.	Remember	<ul style="list-style-type: none"> • Learn about how many different species became endangered HERE. • Choose 5 organisms to write about and identify the factors that may have led to their extinction. Post your response in the discussion board. 	<ul style="list-style-type: none"> • Instructor's feedback on the quality of candidate's ability to identify the factors that may have led to the extinction of some organisms. (discussion rubric)